



State of New Hampshire
DEPARTMENT OF ENVIRONMENTAL SERVICES
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July 28, 2000

Mr. Martin McCrone, Hazardous Waste Coordinator
University of New Hampshire
Environmental Health and Safety
EHS Bldg. – Perpetuity Hall
11 Leavitt Way
Durham, New Hampshire 03824-3547

SUBJECT: UNH Bedrock Bioremediation Center

Dear Mr. McCrone:

The New Hampshire Department of Environmental Services, Waste Management Division has received your January 19, 2000 letter pertaining to the hazardous waste management of various drilling waste streams at the UNH Bedrock Bioremediation Center (BBC) research facility located at Pease International Tradeport (formerly the Pease Air Force Base). The BBC is to study the processes of bioremediation of chlorinated volatile organic compounds in bedrock at one of the Air Force's contaminated sites. We understand that the University of New Hampshire (UNH) and the Air Force have agreed to work together on this research project but the project is essentially a UNH research activity. Your letter requests the Department's regulatory position on various issues dealing with waste management at the BBC site. Based upon a review of the information in your letter and the applicable New Hampshire Hazardous Waste Rules (Env-Wm 100-1000), we offer the following to your questions in the same order as you asked them:

1.) Regulatory oversight at BBC site

The New Hampshire Department of Environmental Services is responsible for regulating the management, transportation and disposal of hazardous waste in New Hampshire, including the BBC site, pursuant to RSA Ch. 147-A and its implementing regulations, the New Hampshire Hazardous Waste Rules, codified as Env-Wm 100-1000.

2.) Notification of Hazardous Waste Activity

Although an EPA identification number already exists for the US Pease Air Force Base (NH7570024847), we believe the BBC is clearly a distinct entity that needs to notify the Department of its hazardous waste activities and obtain a separate EPA identification number. Enclosed please find a Notification Form for UNH to complete and submit in order to obtain a separate EPA identification number.

3.) Groundwater disposal

Given the information in the letter, and New Hampshire's regulatory position that this contaminated groundwater, once extracted, would contain a listed hazardous waste (i.e., trichloroethylene), we have determined that the trichloroethylene contaminated groundwater would be regulated as a hazardous waste mixture in the State of New Hampshire per Env-Wm 404.01(a)(1). Env-Wm 404.01(a)(1) states, in part, that any waste or material (which includes groundwater) mixed with any waste listed in Env-

Wm 402.05(b) (e.g., trichloroethylene – U 228), or Env-Wm 402.06(a) (e.g., spent trichloroethylene solvent – F001/F002) shall be regulated as hazardous waste. This requirement is essentially meant to be equivalent to the federal “contained-in” policy (see enclosed March 26, 1991 EPA letter signed by Sylvia Lowrance and 57 FR 37225, August 18, 1992).

Despite the fact that the contaminated groundwater would be regulated as a hazardous waste, there is an important and relevant aspect of the “contained-in” policy worth noting in this case. As a RCRA authorized state, New Hampshire has the discretion to determine contaminant-specific health-based concentrations, below which wastes subject to the “contained-in” policy would no longer be considered to “contain” hazardous waste and, therefore, would not be regulated as hazardous waste. Generally, the Department would make this determination upon review of analysis showing that the contaminant level is below the NH S-1 standard for soils or the NH GW-1 standard for groundwater in the “NHDES Contaminated Sites Risk Characterization and Management Policy, January, 1998”. In this case, a representative composite sample of the groundwater will need to be collected and analyzed. If the trichloroethylene analysis of the groundwater is less than the NH GW-1 standard of 5 parts per billion, the groundwater is not contaminated with any other constituent to cause it to be regulated as a hazardous waste mixture, and the groundwater does not otherwise exhibit a hazardous waste characteristic, then the contaminated groundwater would not be regulated as a hazardous waste. To the extent that this is demonstrated, the groundwater may be disposed of at the Air Force Site 8 groundwater treatment plant which has been approved as part of the Superfund Program and has a groundwater permit. If the groundwater does not meet these conditions, the Site 8 treatment plant would need to obtain a Hazardous Waste Limited Permit in accordance with Env-Wm 353.04 prior to receiving any groundwater for treatment or disposal. Enclosed please find a Limited Permit Application Form for UNH to complete and submit in the event that testing indicates the groundwater is to be regulated as hazardous waste. As an alternative to obtaining a Limited Permit, UNH may ship the groundwater off-site as a hazardous waste for delivery to a permitted facility authorized to handle the hazardous waste.

4.) Spent decontamination solution disposal

As with any other wastes, spent decontamination solution is subject to regulation under the Hazardous Waste Rules only if the solution is a listed hazardous waste, exhibits a characteristic of hazardous waste, or constitutes a hazardous waste mixture. In this case, to the extent that the spent decontamination solutions do not exhibit a characteristic (e.g., ignitability), the solutions may be disposed of as a non-hazardous waste at the Site 8 treatment plant. If the solutions do exhibit a characteristic of hazardous waste, the treatment plant would need to obtain a Hazardous Waste Limited Permit prior to receiving the solutions. As an alternative to obtaining a Limited Permit, UNH may ship the spent decontamination solution off-site as a hazardous waste for delivery to a permitted facility authorized to handle the hazardous waste.

5. & 6.) Spent decontamination solution

See answer to Question 4.

7.) Drilling Water

As with any other wastes, used drilling water is subject to regulation under the Hazardous Waste Rules only if the used water is a listed hazardous waste, exhibits a characteristic of hazardous waste, or constitutes a hazardous waste mixture. We understand the drilling water to be used is obtained from an off-site source in order to ensure no outside contamination is introduced into the wells. In this case, to the extent that the used drilling water does not exhibit a characteristic, the water would not be subject to regulation under the Hazardous Waste Rules and could be disposed of at the Site 8 treatment plant.

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As explained in Question 3 & 4, if the used drilling water does exhibit a characteristic of hazardous waste, the treatment plant would need to obtain a Hazardous Waste Limited Permit prior to receiving the used drilling water. As an alternative to obtaining a Limited Permit, UNH may ship the drilling water off-site as a hazardous waste for delivery to a permitted facility authorized to handle the hazardous waste.

Please note that UNH could complete and submit a single Limited Permit Application Form for any or all of the various hazardous waste streams proposed to be treated at the Site 8 treatment plant.

8.) Rock Cores

Given the information in the letter, and New Hampshire's regulatory position that the rock cores would contain a listed hazardous waste (i.e., trichloroethylene), we have determined that the trichloroethylene contaminated rock cores would be regulated as a hazardous waste mixture in the State of New Hampshire per Env-Wm 404.01(a)(1). Env-Wm 404.01(a)(1) states, in part, that any waste or material (which includes rock cores) mixed with any waste listed in Env-Wm 402.05(b) (e.g., trichloroethylene – U 228), or Env-Wm 402.06(a) (e.g., spent trichloroethylene solvent – F001/F002) shall be regulated as hazardous waste. This requirement is essentially meant to be equivalent to the federal "contained-in" policy (see enclosed March 26, 1991 EPA letter signed by Sylvia Lowrance and 57 FR 37225, August 18, 1992).

Despite the fact that the contaminated rock cores would be regulated as a hazardous waste, there is an important and relevant aspect of the "contained-in" policy worth noting in this case. As a RCRA authorized state, New Hampshire has the discretion to determine contaminant-specific health-based concentrations, below which wastes subject to the "contained-in" policy would no longer be considered to "contain" hazardous waste and, therefore, would not be regulated as hazardous waste. Generally, the Department would make this determination upon review of analysis showing that the contaminant level is below the NH S-1 standard for soils in the "NHDES Contaminated Sites Risk Characterization and Management Policy, January, 1998". In this case, a representative composite sample of the rock cores will need to be collected and analyzed. If the trichloroethylene analysis of the rock cores is less than the NH S-1 standard of 0.8 mg/kg, the rock cores are not contaminated with any other constituent to cause them to be regulated as a hazardous waste mixture, and the rock cores do not otherwise exhibit a hazardous waste characteristic, then the contaminated rock cores would not be regulated as a hazardous waste. To the extent that this is demonstrated, the contaminated rock cores would no longer be subject to regulation under the New Hampshire Hazardous Waste Rules, but would, however, need to be managed as a solid waste under the New Hampshire Solid Waste Rules which may allow disposal at the Air Force's on-site landfill or the Turnkey Landfill in Rochester, New Hampshire. Prior to disposal as a solid waste we suggest you first contact the solid waste facility for prior approval. Should you have any solid waste regulatory questions you may contact Richard Reed, Administrator of the Solid Waste Management Bureau at (603)271-2925.

9.) Drill Cuttings

See answer to question 8.

We hope this letter assists you in your efforts to comply with the hazardous waste management regulations at the BBC site. Although the NH GW-1 standard for groundwater and the NH S-1 standard for soils are used to make a non-hazardous waste determination, we could approve higher levels on a case-by-case basis under Env-Wm 401.02(b). If you have questions on this letter, please feel free to call Tod G. Leedberg, Waste Management Specialist, at 271-2942 for hazardous waste compliance issues, or Dick Pease of the Hazardous Waste Remediation Bureau, at 271-3744, for site management/remediation issues.

Mr. Martin McCrone

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Sincerely,

John J. Duclos, Supervisor
Hazardous Waste Compliance Section
Waste Management Division

cc: DB/RCRA/RPB
John Regan, HWRB
Dick Pease, HWRB
Richard Reed, SWMB

Enclosure:
Notification Form
Limited Permit Application Form
March 26, 1991 EPA letter
57 FR 37225, August 18, 1992